



Figure 2-24 Thin section image from the Paluxy Formation (5,900.5 feet core depth) in Louisiana Green Fuels Stratigraphic Test Well (La SN975841) (magnification 50x). This thin section image illustrates the fine-grained, terrigenous, and laminated character of argillaceous sandstones of the Paluxy Formation. The XRD measurements for this sample confirm that it is dominated by quartz (39.3 weight %). However, the silt to very-fine, detrital quartz sand occurs with abundant clay (36.9 weight %). The brownish red coloration of the fine-grained matrix is due to elevated hematite (6.2 weight % determined from XRD). Visual intergranular porosity is limited, and measured permeability is 0.0000390 mD (using the pulse decay technique on crushed samples). The exceedingly low measured permeability of the Paluxy Formation argillaceous sandstones is consistent with the fine grained, poorly sorted character observed in thin section.